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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/998,174

12/03/2001

S. Brandon Keller

10014123-1

6179

7590

10/03/2005

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
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EXAMINER

PHAN, THAI Q

ART UNIT

PAPER NUMBER

2128

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/998,174

Applicant(s)

KELLER ET AL.

Examiner

Thai Q. Phan

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office Action is in response to applicants' amendment filed on 07/05/2005.

Claims 1-20 are pending in the present Office Action.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Fallah-Tehrani et al, US patent no. 6,405,348 B1.

As per claim 1, Fallah-Tehrani anticipates a method for analyzing circuit netlist including delay analysis, netlist compression, etc. with feature limitations very identical to the claimed invention. According to Fallah-Tehrani, the method includes computerized processing steps

Selecting at least a net from a plurality of nets contained in the circuit, each of the plurality of nets being a distributed RC net models (col. 6, Section III),

Compressing at least a second net connected to the first net by removing resistor or combining (coupling) just capacitors in the distributed RC net of the at least a second net, and assigning the at least a second net a total capacitance representing a sum

Art Unit: 2128

(coupled) of capacitors of the second net above (col. 7, lines 5-19, col. 7, line 40 to col. 9, line 25).

As per claim 2, Fallah-Tehrani anticipates RC nets in the channel connected components (or isolate transistor as claimed).

As per claims 3-7, Fallah-Tehrani anticipates the claimed limitations for the timing analysis.

As per claims 8-9, Fallah-Tehrani anticipates a method for analyzing circuit netlist including delay analysis, netlist compression, etc. with feature limitations very identical to the claimed invention. According to Fallah-Tehrani, the method includes computerized processing steps

Selecting at least a net from a plurality of nets contained in the circuit, each of the plurality of nets being a distributed RC net models (col. 6, Section III),

Compressing at least a second net connected to the first net by removing resistor or combining just capacitors in the distributed RC net of the at least a second net, and assigning the at least a second net a total capacitance representing a sum of capacitors (coupled capacitors) of the second net above (col. 7, lines 5-19, col. 7, line 40 to col. 9, line 25),

And calculating a current or a gross current for the first net using the combined capacitor RC net or the compressed net for an electromigration analysis for instance.

As per claims 10 -12, Fallah-Tehrani anticipates the features claimed such as a downstream inverter, gate terminal, etc.

As per claim 14, Fallah-Tehrani anticipates a computer program product for analyzing circuit netlist including delay analysis, netlist compression, etc. with feature limitations very identical to the claimed invention. According to Fallah-Tehrani, the computer program product includes processing instructions when executed performs steps

Selecting at least a net from a plurality of nets contained in the circuit, each of the plurality of nets being a distributed RC net models (col. 6, Section III),

Compressing at least a second net connected to the first net by removing resistor or combining just capacitors in the distributed RC net of the at least a second net, and assigning the at least a second net a total capacitance representing a sum or grouped of capacitors of the second net above (col. 7, lines 5-19, col. 7, line 40 to col. 9, line 25).

Similarly, Fallah-Tehrani anticipates the claimed limitations in claims 15 and 16 such as power grids, distributed RC net with isolation point, coupling capacitor or summing capacitors as claimed.

As per claims 17-18, Fallah-Tehrani anticipates a computer program product for analyzing circuit netlist including delay analysis, netlist compression, timing analysis, electromigration analysis, etc. with feature limitations very identical to the claimed invention. According to Fallah-Tehrani, the computer program product includes instruction processing executed by the computer to perform steps

Selecting at least a net from a plurality of nets contained in the circuit, each of the plurality of nets being a distributed RC net models (col. 6, Section III),

Compressing at least a second net connected to the first net by removing resistor and combining/coupling just capacitors in the distributed RC net of the at least a second net, and assigning the at least a second net a total capacitance representing a sum or coupled of capacitors of the second net above (col. 7, lines 5-19, col. 7, line 40 to col. 9, line 25),

And calculating a current or a gross current for the first net using the combined capacitor RC net or the compressed net for an electromigration analysis for instance.

As per claim 20, Fallah-Tehrani anticipates net connected to inverter as claimed.

As per claims 13 and 19, Fallah-Tehrani anticipates the claimed limitation by using the superposition techniques to search for a total response from selected compressed net.

### ***Response to Arguments***

Applicant's arguments with respect to amended claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US patent no. 4,560,963, issued to Sharpe, Robin, on Dec. 1985
2. US patent no. 5,568,395, issued to Huang, Tammy, on Oct. 1996

3. US patent no. 5,896,300, issued to Raghavan et al, on Apr. 1999
4. US patent no. 6,075,932, issued to Khouja et al, on June 2000
5. US patent no. 6,345,379, issued to Khouja et al, on Feb. 2002
6. US patent no. 6,438,729, issued to Ho, William Wai Yan, on Aug. 2002

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Q. Phan whose telephone number is 571-272-3783. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached on 571-272-3780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2128

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sept. 27, 2005

A handwritten signature in black ink, appearing to read 'Thai Phan', with a stylized, cursive script.

Thai Phan  
Patent Examiner